

Bold and single underline = new language since preliminary adoption

~~Bold, strikeout and single underline~~ = new language being stricken since preliminary adoption

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TITLE 326 AIR POLLUTION CONTROL BOARD

RULE AS PRELIMINARILY ADOPTED AND PROPOSED FOR FINAL ADOPTION WITH SUGGESTED CHANGES

LSA Document #98-236 DIGEST

Amends 326 IAC 1-1-3 references to the Code of Federal Regulations. Adds 326 IAC 1-1-3.5 to establish references to the Compilation of Air Pollution Emission Factors AP-42 and supplements. Adds 326 IAC 1-2-20.5 to define Compilation of Air Pollution Emission Factors AP-42. Amends 326 IAC 1-2-52 concerning the definition of particulate matter. Adds 326 IAC 1-2-52.2 to define PM_{2.5}. Adds 326 IAC 1-2-52.4 to define PM₁₀. Adds 326 IAC 1-2-82.5 to define total suspended particulate definition. Amends 326 IAC 1-3-4 concerning ambient air quality standards. Effective 30 days after filing with the secretary of state.

HISTORY

Findings and Determination of the Commissioner Pursuant to IC 13-14-9-8, Draft Rule, and Notice of First Hearing: November 1, 1998, Indiana Register (22 IR 554).

Date of First Hearing: February 3, 1999.

Proposed Rule and Notice of Public Hearing: April 1, 1999, Indiana Register (22 IR 2295).

Date of Second Hearing: May 5, 1999.

326 IAC 1-1-3

326 IAC 1-1-3.5

326 IAC 1-2-20.5

326 IAC 1-2-52

326 IAC 1-2-52.2

326 IAC 1-2-52.4

326 IAC 1-2-82.5

326 IAC 1-3-4

SECTION 1. 326 IAC 1-1-3 IS AMENDED TO READ AS FOLLOWS:

326 IAC 1-1-3 References to the Code of Federal Regulations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 3. Unless otherwise indicated, any reference to a provision of the Code of Federal Regulations (CFR) shall mean the July 1, ~~1996~~, **1997**, edition*.

*Copies of the Code of Federal Regulations (CFR) referenced in this section may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, **Tenth Floor**, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-1-3; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2369; filed Jan 6, 1989, 3:30 p.m.: 12 IR 1102; filed Dec 14, 1989, 9:35 a.m.: 13 IR 868; filed Aug 9, 1991, 11:00 a.m.: 14 IR 2218; filed May 25, 1994, 11:00 a.m.: 17 IR 2237; filed Jul 25, 1995, 5:00 p.m.: 18 IR 3381; filed Jul 25, 1997, 4:00 p.m.: 20 IR 3298*)

SECTION 2. 326 IAC 1-1-3.5 IS ADDED TO READ AS FOLLOWS:

326 IAC 1-1-3.5 References to the Compilation of Air Pollution Emission Factors AP-42 and supplements

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 3.5. Unless otherwise indicated, any reference to the Compilation of Air Pollution Emission Factors AP-42 means the January 1995, Fifth Edition, Volume I*, including the following AP-42, Fifth Edition, Volume I supplements:

- (1) Supplement A, February 1996*.
- (2) Supplement B, November 1996*.
- (3) Supplement C, November 1997*.
- (4) Supplement D, August 1998*.

*Copies of the Compilation of Air Pollution Emission Factors AP-42 and supplements referenced in this section may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-1-3.5*)

SECTION 3. 326 IAC 1-2-20.5 IS ADDED TO READ AS FOLLOWS:

326 IAC 1-2-20.5 "Compilation of Air Pollution Emission Factors AP-42" definition

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 20.5. Unless otherwise provided, references to the Compilation of Air Pollution Emission Factors AP-42 (AP-42) means the version indicated in 326 IAC 1-1-3.5. (*Air Pollution Control Board; 326 IAC 1-2-20.5*)

SECTION 4. 326 IAC 1-2-52 IS AMENDED TO READ AS FOLLOWS:

326 IAC 1-2-52 "Particulate matter" definition

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 52. "Particulate matter" means any airborne finely divided solid or liquid material, excluding uncombined water, with an aerodynamic diameter smaller than one hundred (100) micrometers (μm), as determined by the methods or procedures specified in each applicable federal rule or state rule or applicable methods or procedures approved by the commissioner.

~~(1) PM_{10} : Any particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (μm) as measured by an applicable reference method specified in 40 CFR Part 50 or by an equivalent or alternative method approved by the commissioner.~~

~~(2) Total suspended particulate (TSP): Any particulate matter as measured by the method described in Appendix B of 40 CFR Part 50.~~

(Air Pollution Control Board; 326 IAC 1-2-52; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2374; filed Apr 13, 1988, 3:35 p.m.: 11 IR 3020)

SECTION 5 . 326 IAC 1-2-52.2 IS ADDED TO READ AS FOLLOWS:

326 IAC 1-2-52.2 " $\text{PM}_{2.5}$ " definition

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 52.2. " $\text{PM}_{2.5}$ " means any particulate matter with an aerodynamic diameter less than or equal to a nominal two and five-tenths (2.5) micrometers (μm) as measured by an applicable reference method specified in:

(1) 40 CFR 50 and 62 FR 38652*, July 18, 1997; and

(2) 40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997.

***Copies of the Code of Federal Regulations (CFR) and Federal Register (FR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-2-52.2*)**

SECTION 6. 326 IAC 1-2-52.4 IS ADDED TO READ AS FOLLOWS:

326 IAC 1-2-52.4 "PM₁₀" definition

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 52.4. "PM₁₀" means any particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (µm) as measured by an applicable reference method specified in:

- (1) 40 CFR 50 and 62 FR 38652*, July 18, 1997; and**
- (2) 40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997.**

***Copies of the Code of Federal Regulations (CFR) and Federal Register (FR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-2-52.4*)**

SECTION 7. 326 IAC 1-2-82.5 IS ADDED TO READ AS FOLLOWS:

326 IAC 1-2-82.5 "Total suspended particulate" or "TSP" definition

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 82.5. "Total suspended particulate" or "TSP" means any particulate matter with an aerodynamic diameter less than a nominal one hundred (100) micrometers (µm) as measured by the method described in 40 CFR 50, Appendix B*.

***Copies of the Code of Federal Regulations (CFR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available**

for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-2-82.5*)

SECTION 8. 326 IAC 1-3-4 IS AMENDED TO READ AS FOLLOWS:

326 IAC 1-3-4 Ambient air quality standards

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 4. The following ambient air quality standards, corrected to a reference temperature of ~~25°C~~: **twenty-five (25) degrees Celsius** and to a reference pressure of **seven hundred sixty** (760) millimeters of mercury (**one thousand thirteen and two-tenths** (1,013.2) millibars), as micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), shall apply:

(1) Sulfur oxides as sulfur dioxide (SO_2) **requirements are as follows:**

(A) ~~Primary Standards: The following values shall represent~~ The maximum permissible ambient air quality levels **for the primary standards are as follows:**

(i) **Eighty** (80) $\mu\text{g}/\text{m}^3$ (~~three-hundredths~~ (0.03) **parts per million** (ppm)) annual arithmetic mean.

(ii) **Three hundred sixty-five** (365) $\mu\text{g}/\text{m}^3$ (~~fourteen-hundredths~~ (0.14) ppm) maximum **twenty-four** (24) hour average concentration not to be exceeded more than one (1) day per year.

(B) ~~Secondary Standards: The following value shall represent~~ The maximum permissible ambient air quality **level for the secondary standards is one thousand three hundred** (1,300) $\mu\text{g}/\text{m}^3$ (~~fifty-hundredths~~ (0.50) ppm) maximum **three** (3) hour concentration not to be exceeded more than once ~~one (1) day~~ per year.

(C) Sulfur dioxide values may be converted to ppm using the conversion factor $2,620 \mu\text{g}/\text{m}^3 = 1.0 \text{ ppm}$.

(2) Total suspended particulate (TSP) **requirements are as follows:**

(A) ~~Primary Standards: The following values shall represent~~ The maximum permissible ambient air quality levels **for the primary standards are as follows:**

(i) **Seventy-five** (75) $\mu\text{g}/\text{m}^3$ annual geometric mean.

(ii) **Two hundred sixty** (260) $\mu\text{g}/\text{m}^3$ maximum **twenty-four** (24) hour average concentration not to be exceeded more than one (1) day per year.

(B) ~~Secondary Standards: The following value shall represent~~ maximum permissible ambient air quality levels **level for the secondary standards is one hundred fifty** (150) $\mu\text{g}/\text{m}^3$ maximum **twenty-four** (24) hour average concentration not to be exceeded more than one (1) day per year.

(3) Carbon monoxide (CO) **requirements are as follows:**

(A) ~~Primary and Secondary Standards: The following values shall represent~~ The maximum permissible ambient air quality levels **for the primary and secondary standards are as follows:**

- (i) ~~Ten~~ (10) milligrams per cubic meter (~~ten thousand~~ (10,000) $\mu\text{g}/\text{m}^3$) (~~nine~~ (9) ppm) maximum **eight** (8) hour average concentration not to be exceeded more than once ~~one (1) day~~ per year.
- (ii) ~~Forty~~ (40) milligrams per cubic meter (~~forty thousand~~ (40,000) $\mu\text{g}/\text{m}^3$) (~~thirty-five~~ (35) ppm) maximum one **(1)** hour average concentration not to be exceeded more than once ~~one (1) day~~ per year.

(B) Carbon monoxide values may be converted to ppm using the conversion factor $1,145 \mu\text{g}/\text{m}^3 = 1.0 \text{ ppm}$.

(4) Ozone (O_3) **requirements are as follows:**

(A) ~~Primary and Secondary Standards: The following values shall represent~~ The maximum permissible ambient air quality ~~level:~~ **levels for the one (1) hour primary and secondary standards are as follows:**

~~The expected number of days with maximum hourly ozone concentrations above $235 \mu\text{g}/\text{m}^3$ (0.12 ppm) shall not exceed one (1) per calendar year.~~

- (i) **The one (1) hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR 50, Appendix D and 62 FR 38856*, July 18, 1997, and designated in accordance with 40 CFR 53 and 62 FR 38764*, July ~~19~~ 18, 1997, are twelve-hundredths (0.12) ppm, (two hundred thirty-five (235) $\mu\text{g}/\text{m}^3$).**
- (ii) **The standards are attained when the expected number of days per calendar year with maximum hourly average concentrations above twelve-hundredths (0.12) ppm (two hundred thirty-five (235) $\mu\text{g}/\text{m}^3$) is equal to or less than one (1.0), as determined by 40 CFR 50, Appendix H and 62 FR 38856*, July 18, 1997.**

(B) **The maximum permissible ambient air quality levels for the eight (8) hour primary and secondary standards are as follows:**

- (i) **The eight (8) hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR 50, Appendix D and 62 FR 38856*, July 18, 1997, and designated in accordance with 40 CFR 53*, are eight-hundredths (0.08) ppm (one hundred fifty-seven (157) $\mu\text{g}/\text{m}^3$).**
- (ii) **The standards are attained at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum eight (8) hour average ozone concentration is less than or equal to eight-hundredths (0.08) ppm (one hundred fifty-seven (157) $\mu\text{g}/\text{m}^3$), as determined in accordance with 40 CFR 50, Appendix I and 62 FR 38856*, July 18, 1997.**

~~(B)~~ (C) Ozone (O₃) values may be converted to ppm using the conversion factor
 $1,965 \mu\text{g}/\text{m}^3 = 1.0 \text{ ppm}$.

(5) Nitrogen dioxide (NO₂) **requirements are as follows:**

(A) ~~Primary and Secondary Standard:~~ The following value shall represent The maximum permissible ambient air quality level **for the primary and secondary standards is one hundred (100) $\mu\text{g}/\text{m}^3$ (five-hundredths (0.05) ppm) annual arithmetic mean.**

(B) Nitrogen dioxide values may be converted to ppm using the conversion factor
 $1,880 \mu\text{g}/\text{m}^3 = 1.0 \text{ ppm}$.

~~(6) Lead (Pb).~~ (A) ~~Primary and Secondary Standard:~~ The following value shall represent The maximum permissible ambient air quality level **for the primary and secondary standards for lead (Pb) is one and five-tenths (1.5) micrograms lead per cubic meter of air (μg of Pb/ m^3), averaged over a calendar quarter and measured as elemental lead.**

(7) The maximum permissible ambient air quality levels for the primary and secondary standards for PM_{2.5} are as follows:

(A) **Fifteen (15) $\mu\text{g}/\text{m}^3$ annual arithmetic mean concentration. The standards are attained when the annual arithmetic mean concentration is less than or equal to fifteen (15) $\mu\text{g}/\text{m}^3$, as determined in accordance with both of the following:**

(i) **40 CFR 50, Appendices L and N, 62 FR 38652*, July 18, 1997.**

(ii) **40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997.**

(B) **Sixty-five (65) $\mu\text{g}/\text{m}^3$ twenty-four (24) hour concentration. The standards are attained when the ninety-eighth percentile, twenty-four (24) hour average concentration is less than or equal to sixty-five (65) $\mu\text{g}/\text{m}^3$, as determined in accordance with both of the following:**

(i) **40 CFR 50, Appendices L and N, 62 FR 38652*, July 18, 1997.**

(ii) **40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997.**

~~(7) PM₁₀.~~ (A) ~~Primary and Secondary Standards:~~ The following values shall represent **(8) The maximum permissible ambient air quality levels for the primary and secondary standards for PM₁₀ are as follows:**

~~(i)~~ (A) **Fifty (50) $\mu\text{g}/\text{m}^3$ annual arithmetic mean concentration.** The standards are attained when the ~~expected~~ annual arithmetic mean concentration, as determined in accordance with:

(i) **40 CFR Part 50, Appendix Appendices K, (per July 1, 1987, 52 FR 24663*), M, and N and 62 FR 38652*, July 18, 1997; and**

(ii) **40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997; and designated in accordance with 40 CFR 53*, is less than or equal to fifty (50) $\mu\text{g}/\text{m}^3$.**

(ii) **(B) One hundred fifty** (150) $\mu\text{g}/\text{m}^3$ ~~maximum~~ **twenty-four** (24) hour average concentration. The standards are attained when the ~~expected number of days per calendar year with a~~ **ninety-ninth percentile, twenty-four** (24) hour average concentration ~~above 150 $\mu\text{g}/\text{m}^3$~~ ; as determined in accordance with:

(i) 40 CFR Part 50, ~~Appendix~~ **Appendices K, (per July 1, 1987, 52 FR 24663*), M, and N and 62 FR 38652*, July 18, 1997; and**

(ii) **40 CFR 53, 40 CFR 58, and 62 FR 38764*, July 18, 1997; and designated in accordance with 40 CFR 53*, is equal to or less than one or equal to one hundred fifty (150) $\mu\text{g}/\text{m}^3$.**

~~*Copies of July 1, 1987 Federal Register Notice (52 FR 24663)~~ **the Code of Federal Regulations (CFR) and Federal Register (FR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available from for copying at the Indiana Department of Environmental Management, Office of Air Management, 105 South Meridian Street, Indiana Government Center-North, 100 North Senate Avenue, Tenth Floor, Indianapolis, Indiana 46225- 46204.** (*Air Pollution Control Board; 326 IAC 1-3-4; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2378; filed Apr 13, 1988, 3:35 p.m.: 11 IR 3020*)